

**ABSTRACT OF DISCLOSURE**

A temperature detection circuit comprises an OP amp, a reference current generator, a temperature detection voltage generator, a comparator, and a band gap reference voltage generator. The OP amp receives a band gap reference voltage and a first voltage. The reference current generator generates the first voltage and a reference voltage in response to an output signal of the OP amp. The temperature detection voltage generator generates a temperature detection voltage in response to an ambient temperature and the output signal of the OP amp. The comparator compares the reference voltage with the temperature detection voltage to generate a temperature control signal. The band gap reference voltage generator generates the band gap reference voltage. Accordingly, the temperature detection circuit of the present invention can perform high or low temperature detection stably in supply voltage and temperature variations and thus protect the operation of the integrated circuit.